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ABSTRACT

The studies discussed in this paper are federally funded intervention studies involving preschool children and follow-up studies of early elementary school children. This paper is divided into three major sections: Day Care Intervention Studies, Child Development Intervention Studies, and Child Advocacy Programs. The purpose of this review is to: (1) describe the ongoing studies funded in fiscal year 1970-71 of intervention with preschool and early elementary school children; (2) discuss pertinent findings when they are available, and (3) identify existing gaps and needs in the longitudinal study of preschool intervention. A summary chart highlighting the overall needs and gaps in federally funded early childhood intervention studies precedes each paper. (Author/CS)

EARLY CHILDHOOD RESEARCH AND DEVELOPMENT NEEDS AND GAPS IN FEDERALLY FUNDED INTERVENTION STUDIES WITHIN A LONGITUDINAL FRAMEWORK

A Working Paper

Prepared for the Interagency Panel on Early Childhood Research and Development

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Introduction

Intervention studies funded by the agencies of the Federal Interagency Panel on Early Childhood Research and Development include the following areas:

- physical and psychological treatment,
- interventions with special groups of children including autistic, mentally retarded, pre-delinquent, the orthopedically handicapped, and the deaf and blind,
- research into educational delivery systems, techniques and curricula for school age children, and
- various types of interventions developed specifically for infants and preschool children from low income, culturally deprived families, or for children of minority groups or follow up into the early primary grades.

The studies discussed in this paper and annotated in the appendix are in this last category of interventions with, or for, preschool children and follow-up studies with early elementary school children. Studies of elementary school children, studies of staff training or only of curriculum development without an ongoing program are not included at this time. With few exceptions, only studies which are measuring some outcome among the children, among the parents, or on an institution are included.

The purpose of this review is to:

- describe the ongoing studies funded in FY 70 and 71 of intervention with preschool and early elementary school children.
- discuss pertinent findings when they are available, and
- identify existing gaps and needs in the longitudinal study of preschool intervention.

Though relatively few of the studies described here are longitudinal ones, the areas they are researching and their findings are important in future planning of intervention studies within a longitudinal framework.

Organization of This Paper

This paper is divided into three major sections: Day Care Intervention Studies, Child Development Intervention Studies, and Child Advocacy Programs.

In each section the studies are organized according to their particular focus. These studies, as well as other relevant research, are then dicussed and the findings, when available, reported. At the end of each section there is a listing of the major gaps in research in each of the three areas. The studies described in the appendices have been numbered within each appendix. As studies are described in the text, they are referred to by their number in the appendix.

Preceding the narrative descriptions of studies, needs, and gaps, is a chart highlighting the needs and gaps in federally funded intervention studies.

Early Childhood Research and Development

Needs and Gaps in Federally Funded Intervention Studies

Research Issues	Parent Participation				Program for Child			
	Child Development Training	As Tutor of Own Child	As Staff	As Decision Maker	Infant and Preschool Center	Infant and Preschool Home	Day Care Center	Day Care Home
Longitudinal Issues								
Age of child at initial intervention	N	N	G	G	N	N	N	G
Number of hours of intervention per week	N	G	G	-	G	G	-	-
Age of child at termination of intervention	G	G	-	-	-	-	G	G
Optimal age of child for different intervention components	G	G	-	-	G	G	G	G
Effect of different sequences of intervention programs over time	G	G	G	G	G	G	G	G
Long-term assessment following intervention	G	G	G	G	N	G	G	G

Key

G = almost none or no research

N = some research findings or current efforts but more needed

- = not applicable

Early Childhood Research and Development

Needs and Gaps in Federally Funded Intervention Studies

Research Issues	Parent Participation				Program for Child			
	Child Development Training	As Tutor of Own Child	As Staff	As Decision Maker	Infant and Preschool Center	Infant and Preschool Home	Day Care Center	Day Care Home
Independent Variables								
Compare different program elements (eg. medical, social services, education)	G	G	G	G	G	G	G	G
Parent as decision-maker in program	N	G	N	-	N	G	G	N
Parent education in child development	-	-	-	G	N	N	G	G
Home vs. center intervention with children	-	-	-	-	N	N	G	G
Indirect intervention (eg. welfare, jobs, income maintenance) with parents and children	G	G	G	G	G	G	G	G
Compare different curricula	N	G	N	G	N	G	G	G
Use of TV	N	G	G	G	N	N	N	N
Educational technology (includes films, video tapes, programmed and computer-assisted learning, and toys)	N	N	N	G	N	N	N	G
Peer effects	G	-	G	G	G	-	G	G

Early Childhood Research and Development

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Research Issues	Parent Participation				Program for Child			
	Child Development Training	As Tutor of Own Child	As Staff	As Decision Maker	Infant and Preschool Center	Infant and Preschool Home	Day Care Center	Day Care Home
Dependent Variables								
Cognitive characteristics of own child	N	N	G	G	N	N	N	G
Social-emotional characteristics of own child	G	G	G	G	G	G	G	G
Physical characteristics of own child	N	N	G	G	N	N	N	G
Cognitive, social-emotional, and physical characteristics of parents	N	N	N	G	-	N	-	-
Family relationships	N	N	N	G	G	N	N	G
Indirect effects, as on neighbor children and siblings	G	N	G	G	N	N	G	G
Impact on institutions	G	G	N	N	-	G	-	-

Early Childhood Research and Development

Needs and Gaps in Federally Funded Intervention Studies

Research Issues	Parent Participation				Program for Child			
	Child Development Training	As Tutor of Own Child	As Staff	As Decision Maker	Infant and Preschool Center	Infant and Preschool Home	Day Care Center	Day Care Home
Methodological Issues								
Individualized programming	G	N	G	G	N	N	N	G
Assessing individual differences	G	N	N	G	N	N	N	G
Examine sub-test scores of children	G	N	G	G	N	N	N	G
Examine configuration of multiple single measures	G	G	G	G	G	G	G	G
Examine process of change as well as products of change	G	N	N	N	G	N	G	G
Results as a function of differing experiences following intervention	G	G	G	G	N	G	G	G
Examine for unintended positive or negative effects	G	N	N	G	N	N	G	G
Consideration of relation between development, evaluation, and utilization of findings	G	N	G	G	N	N	N	G
Inter-project collaboration	G	G	G	G	G	G	G	G

Recent and Currently Funded Studies

Day Care Intervention Studies

Twelve day care studies are included in Appendix A, pp. 1-6 of this paper. Ten of these are providing full day care for infants and young children. The other two studies are experimenting and evaluating specific ways of staffing day care centers: one with male workers (study #9) and the other with Neighborhood Youth Corps workers (study #10). These intervention studies, along with recent and ongoing surveys of need and demand, of auspices of day care centers, of the costs and of supportive services are fully described in "A Review of the Present Status and Future Needs in Day Care Research" by Chapman and Lazar. Therefore, only the most crucial issues will be discussed here. Five studies are evaluating day care services. These studies are described in Appendix H, #1-5.

Discussion and Findings

From the point of view of child development experts (as contrasted with employers, day care operators, or the general public) the most crucial questions are: "What are the long-term effects of the day care experience on the social-emotional, cognitive and physical development of the children?" In spite of the fact that day care programs have been in existence for many years, only a few university-based programs have attempted any systematic evaluations of this question. These studies provide only relatively short-term results. Data on adults, or even adolescents who were in day care situations as children are simply not available. Further, it is unlikely that these model, university-based programs are representative of "typical" day care situations available in most communities. Data from these model programs indicate that the measured cognitive development of the children in these programs did not seem to be impaired. In fact, the children frequently showed significantly higher I.Q. scores than their controls. These are, however, short-term results, and it is not yet known whether this finding will hold true for children in day care with other types of sponsors or over longer periods of time.

Again based on university sponsored day care situations, the health of the day care children does not seem to be adversely affected with the possible exception of a greater frequency of colds and runny noses, although data in the health area are even more sparse than in the area of cognitive development. For children in typical day care situations, little is known about how the day care situation affects the day-to-day health as well as the long term health of the children.

Releasing mothers to work by the provision of day care services and the consequent increase in income is an obvious immediate benefit, but other impacts on the family have not been fully assessed. There are almost no data on the impact on the mother of full day separation from the child as well as about the impact on the mother-child relationship or on siblings.

The impact of day care on the labor force activity of mothers is currently being evaluated by ASPE and the impact on the employer is being evaluated by Child Welfare Research based on the experiences in the day care center for HEW employees. The findings of these studies should be available in the near future. We do not yet know how many mothers are actually employed as a result of day care, and if the increase in family earnings exceeds the cost of the day care services.

Needs and Gaps in Day Care Intervention Studies

The following list of needs and gaps in research in day care is excerpted from the Review of Day Care Research:

> We need to measure the impact on the children of "typical" day care programs within the community.
>
> There is need to measure the long-range impact of separation from the mother.
>
> We need to know more about the subtle effects on children of separation and of day care in general, and for children with different characteristics and backgrounds.
>
> We need to know more about the relation between the nature of the child-caregiver relationship and the impact of separation from the mother.

We also need to know more about:

- The impact of changing from one type of program to another.
- The dynamics of children's behavior in groups.
- Effects of various age mixtures.
- Effects of socio-economic and/or ethnic mix.
- Optimal day care experiences for children with special problems or characteristics.
- Effects of periodic intervention at different age periods.

In relation to the curricula of day care programs, there is need for further:

- Development of additional infant stimulation and day care curricula.
- Controlled comparisons between various preschool curricula, between various infant stimulation curricula, and between various day care curricula.
- Determination of what kinds of curricula are effective for what kinds of children.
- Demonstration and examination of the process of replicating program models.
- Determination of available sources of and demand for child care for school age children.
- Development of additional child care services for school age children.

Physical and mental health research needs in day care are:

- There is need to develop data on the types and extent of medical services available through state and local health departments for infants and toddlers comparable to the Head Start census data of preschool children.
- Existing epidemiological studies of respiratory diseases among children in group care need to be replicated. It is important to use standardized surveillance and criteria in replications so that data from different studies will be comparable.
- Data are needed on the presence and/or prevalence of such conditions as anaclitic depression and hospitalism among infants in various day care conditions.

- Studies are needed to determine the incidence of pathological maturational adaptations within various day care systems of children at various ages as compared with the prevalence in control groups.

- Data are needed on the presence or prevalence of gross pathologies such as marasmus, autism, childhood schizophrenia and psychopathic disorders.

- A methodology for assessing mental health in young children needs further refinement including measures of social-emotional adjustment.

- We need to continue to examine whether children in day care have increased or decreased social skills when compared to controls.

- There needs to be a periodic assessment of the federal standards for day care, as well as a review of state laws, regulations and licensing procedures regulating health standards for day care.

- New systems for delivering medical services to poor and non-poor children in day care centers needs investigation.

- Innovative approaches to staffing of health services of day care centers needs exploration along with training programs for medical paraprofessionals.

Nutrition research needs in day care are:

- Ongoing studies of the relationship between malnutrition and behavior need to be continued and replicated.

- Continued development of a methodology for studying both the nutritional and non-nutritional variables affecting physical and cognitive development is a priority need.

- Longitudinal and follow-up studies of the relationship between certain deficits - protein, iron for example, needs continued investigation.

- We need multi-disciplinary studies which control for genetic as well as social and nutritional factors to replicate existing studies.

- There is need to study how to motivate adults and children to act in accordance with information they already know about good diet.

- There is need to investigate the effects of media advertising on food choices of young children.

Social services research needs in day care:

- There is need to establish firm criteria and outcome measures for assessing the impact of social service programs.

- There is need to examine whether it is more expensive to assign staff to locate material resources than to supply them to needy families.

- The extent to which specific groups of people become more or less dependent when money is given to them to meet their needs, needs further research.

- We need to examine the extent to which specific groups of people are rehabilitated or encouraged in dependency by the provision of massive social service intervention.

- The differences between intervention strategies: case work, advocacy, community organization, confrontation, needs further assessment to identify appropriate interventions for particular circumstances.

- There needs to be continued examination of professional social work and paraprofessional roles along with appropriate changes in selection and training programs for both groups.

Child Development Intervention Studies

Descriptions of Programs

Infant and Preschool Part-time Intervention Programs

Twenty infant and preschool part-time intervention projects are included in Appendix B, pp. 7-29. Other longitudinal intervention studies are discussed and included in the appendix of the longitudinal paper (pages 45 to 52).

The FY 70 and 71 intervention studies of infant and preschool intervention range from highly intensive investigations with very small numbers of children (e.g., study #1) which is funded to observe 4 to 6 infants in a controlled environmental setting to an evaluation of the impact of the preschool experience of 1800 children in New York State prekindergartens (study #10).

The 20 studies are evaluating 8 different aspects of preschool programs:

1. The effects of environmental manipulation are being investigated by Ricciuti with 4 to 6 infants in study #1.

2. The development of language among Negro preschoolers and intervention procedures designed to produce more complex spontaneous language are being investigated by Schiefflbush in study #2.
   Mothers are being trained to use praise and other social reinforcers to facilitate language development and school readiness in study #9.

3. The effects of a cross-cultural preschool experience on the mental health of the children are being examined in study #4 by Mary Lane. In this study 60 children, equally represented by Japanese, Negro and mainstream children are being provided a nursery school experience. Their progress will be followed through the third grade.

4. The effects of specific preschool models are being examined in 8 studies:

   - The Responsive Environment Curricula is being examined with Mexican-American children (#3).

   - The Learning to Learn Curricula of Sprigle (#5).

- The Montessori Curricula (#6).

- The Enriched Curricula of Martin and Cynthia Deutsch (#7 and 8).

- A Theory of Conceptual Development is being tested in a preschool program by Irving Sigel (#13).

- The long range effects of Individualized programming (#12).

- A Structured Curriculum is being assessed among children from ages 3 through 9 by Powell (#15).

- Programmed materials and Teaching Machines as an adjunct to a regular preschool program are being assessed in study #14 by Hemphill.

5. The Impact on the Children of a Parent-Initiated Preschool Program is being investigated by Bell in study #20 to see if these children will show greater gains on such variables as I.Q., self-esteem and school readiness than controls in a regular nursery school.

6. Preschool Experiences with Mexican-American Children are being provided in 4 programs. Study #3(included above) is exploring the effects of the responsive environment curricula with these children. Two studies #16 and 18 are examining the effects of a bilingual preschool program, and 1 study (#17) is focusing on teaching English to 3 and 4 year old Spanish-speaking children in a preschool setting.

7. The Development of Models by the National Laboratory to provide specifications for instructional systems, delivery systems, evaluation and installation data and support systems is the focus of study #11.

8. Cognitive, Social Development, Self-Concept and Motor Development changes among 1800 children exposed to prekindergarten experiences have been evaluated by Lorenzo in his study number 10.

Discussion. The majority of these infant and preschool intervention studies are less comprehensive than most of the intervention studies discussed in the longitudinal paper (see pp. 20-21). Many of the intervention studies described here are addressing themselves to specific issues or curricula. This is not meant to imply any criticism of these studies, since many scientists feel that research issues must be examined first in small, controlled studies before findings can be applied in broader settings or in

long term investigations. It is, however, suggested that those studies which have positive findings be followed up for longer periods of time than many have initially planned. The findings of these and other intervention studies will be discussed at the end of this chapter.

Twelve of the 20 infant and preschool intervention studies funded in FY 70 and 71 state specifically that they have parent involvement or parent education programs. The parent components of these studies are discussed in the section on Parent Education.

Home Teaching Programs

One of the earliest home tutoring studies was initiated by Earl Schaefer in which college graduates were trained as tutors for young children. Based on Schaefer's findings, most recent studies have been funded to work with both mothers and their infants. Only 2 of the 13 home tutoring projects funded in FY 70 and 71 (see Appendix A, pp. 30-39) are working only with the children (studies #5 and 10) and one of these is a continuation of a study initiated in 1966.

Six other projects (studies 1, 2, 3, 6, 7, 8 and 9)* are providing home visitors to intervene in the teaching style and cognitive stimulation provided by mothers for their infants and young children. The studies of Weikart, Healy, Parkman and Gordon are initiating home training with infants and children under 3 years of age, while the studies of Levenstein and Gilmer are working with older preschoolers.

Three studies are assessing the effects of television as a media for home training. Study #4 being conducted by Kathryn Horton is assessing the effectiveness of video-taped programs for improving the interaction between mothers and their preschool children. Study #12 is an evaluation of the impact of the nationally televised "Sesame Street" with a sample of 3 to 5 year old preschoolers. A study (#11) to assess the utility of televised animated cartoons in teaching reading skills to preschool children is being conducted in El Paso.

The final project in this group is the assessment of a toy library as a means of cultural enrichment for preschool children.

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*Grants 8 and 9 are components of one project being conducted by Ira Gordon.

Though not included in the FY 70-71 system the recently launched program of Home Start will be assessing the impact of home intervention on a broader scale.

Other Parent Education Programs

In addition to the preschool programs which have a parent involvement or parent education component, 10 intervention studies are examining ways of training parents in child development and another 5 are focused on providing similar training for adolescents. (See Appendix D and E for descriptions of these studies.)

Parent Education Projects. Of the 10 projects focused on the general population of parents, 3 studies (1, 2 and 9) are being conducted as a part of a pediatric setting or health center, and another (study #3) is intervening with pregnant women in a maternity care unit. Another study (#5) is providing instruction in parent education and child care in a family development center for Indian families. The public schools are used as the setting for providing parent education to parents of preschool children in study #10 in an attempt to involve the parents in the education of their children prior to entry into the public schools. The use of televised instructional training programs for parents is being developed and tested in another study (#4). Study number 11 is attempting to bring about a change in parental attitudes and behavior through group participation in 8 week sessions modeled after the National Training Laboratory's unstructured group approach.

Parent Education Components. Of the 20 infant and preschool intervention programs previously described, 12 have parent components. Of these 1 is of a parent-initiated and controlled nursery school, and 2 are providing education in child development for the parents. The other 10 are involving parents in the classroom or with the use of materials and in role modeling situations.

Programs to Train Adolescents in Child Development and Parenting

Of the 5 studies training adolescents in child development, 4 are developing curricula or providing adolescent boys and girls with theoretical and field experience and 1 is a family development center which will provide day care for the infants while providing education for the teen age mothers.

Discussion of Parent Involvement and Parent Education Projects. As a result of recent professional interest and the impact of Head Start there has been an increase in the number of projects devoted to parent education or with a parent education component. Since parents are one of the prime agents of socialization of children, there is little doubt that their involvement in programs aimed at increasing the cognitive, social-emotional and physical development of their children is important. However, the impact of this involvement has proved very difficult to measure, particularly in programs in which there is a major child intervention component. Studies of the involvement of Head Start mothers have shown that the children of mothers who participate show greater gains than the children whose mothers do not participate, but it is likely that these mothers also differ in ways other than their participatory behavior. The home tutoring programs of Gordon and Levenstein also involve direct work with the infants and children. In the Karnes study (1970) the children of the mothers trained in child development techniques were placed in a day care situation. The control group of mothers not trained, also had children in the day care situation, but as Karnes points out, the gains in the control group may have been related to the Hawthorne effect among the mothers as much as to the training they received. The impact of involvement of the parents is usually measured by changes in the children.

The Verbal Interaction Mother-Child Home Program of Levenstein (1968, 1970, 1971) has yielded some interesting findings. In this home visiting study, Levenstein had 2 control groups. In one, mothers received weekly visits from a social worker who conducted an interview and left toys without providing verbal stimulation for the infant. The second control received only pre-post testing with no intervening home visits. Follow-up data with the first group of controls showed a gain of 10 points in I.Q. after 1 year, and a significant increase of 18 points after 30 months. In discussing Levenstein's findings Beller states,

> The picture that seems to emerge from these findings is that the control groups which include either regular home visits and leaving any toys, or leaving VISM (Verbal Interaction Stimulation Materials) only, manifest either immediate or delayed significant gains. This leaves only one control group, namely, the one which received neither home visits nor toys as the one which manifested no significant gain either after the eight month period or after thirty months following the initial testing. (p.20.)

These findings would indicate that there is need to explore further the amount and type of parent and child participation necessary to produce gains.

Major National Programs

The 6 major national programs described in Appendix F, pp. 47-48, include the Research and Development Centers, the Educational Laboratories and the National Program for Early Childhood Education (NPECE) all funded by the Office of Education. Each of these is funded to conduct long-term programs of research and development in education. NPECE focuses on research in early childhood and in the development of materials and practices in pre-school education.

The 2 major ongoing national research studies stemming from Head Start are the Planned Variation study and the National Follow Through. Planned Variation funded by OCD is developing and assessing the impact of various types of curricula in Head Start programs, and Follow Through, funded by OEO and operated by OE, is following up on 60,000 children from low income families.

Evaluation Studies

Nineteen evaluation studies of various child development programs are described in Appendix H. The 5 studies evaluating day care programs (#1-5) have been mentioned in the day care section of this paper. Eight studies are evaluating preschool intervention programs such as Head Start, Health Start, Follow Through, and Planned Variation (#6-13). Two studies are involved with the evaluation of Parent-Child Centers (#14, 15). Each of the remaining 4 studies is evaluating a wide range of programs for children and parents (#16-19).

Findings of Child Development Intervention Programs

The findings of many of the studies funded in FY 70 and 71 have not yet been reported, so that the following discussion is based in large part on results from previous studies. These previous studies do, however, provide a great deal of information on which to base future planning.

There is no longer any question that exposure to preschool education has an effect on the intellectual development in the short run. The task now is to find out what kinds of programs have an effect on what kinds of children and how long the intervention should last.

A review of a large number of studies indicates that:

1. Nearly all studies report that short-term interventions produce immediate increases in I.Q. and Achievement. Increases have been reported by programs which work only with the child as well as programs which work with the child as well as the family.

2. The effect of age of entry into preschool on intellectual development and school achievement is unclear at this time. A number of studies have reported that the age or the number of years spent in preschool or early education programs did not affect the amount of gain in I.Q. and/or achievement. However, recent reports have provided other evidence. Beller (1972) reports on a study of his in which 3 groups of children entered school at different times: 1 at preschool, 1 in kindergarten and the third in the first grade. The preschool group received a traditional nursery program prior to entering kindergarten. At the end of the fourth grade the children who had experienced the preschool program scored significantly higher on the Stanford-Binet, and were consistantly and significantly ahead on all subjects except science from the first to the fourth grades. In a recent report by Weikart (1971) he finds that 7 years after the end of a preschool program, though the experimental children are not significantly ahead in I.Q., they are in grade placement. Eighty-three percent of the experimental children compared with 61% of the controls with no preschool intervention were placed in the expected grade; 17% of the experimental children and 39% of the controls were placed either in special education classes or were behind their grade level.

3. Short-term preschool interventions produce gains in I.Q. and achievement tests, but in follow-up studies it has been found that the experimental children tend to level off while the controls "catch up."

4. Sleeper effects have been reported in some follow-up studies in which significant differences in achievement appear at the end of the second grade. (Hubbard, Staglich, Cartwright and Allen, 1965, and Weikart, 1971.) In these studies significant differences in achievement appear at the end of the second grade even though there were no differences at the end of the first grade.

5. Even in programs where interventions have been comprehensive, assessments have been narrow. In part because better instruments exist to measure cognitive changes than socio-emotional changes, and because the effects of medical and social service inputs are often difficult to measure, most intervention studies have concentrated on describing cognitive gains. Even when other aspects of the child have been assessed and reported, the press and general public are apt to focus attention on I.Q. changes. However, currently funded studies tend to be using a wider variety of measures than did the earlier studies.

6. The amount of increase in I.Q. seems to be related to the kind of experience the child has in the program. Small, well designed university-based model programs report greater gains than do mass programs. (Datta, 1969, and Bissell, 1971.)

7. There are 8 program models in the Planned Variation study. Successful replication and implementation of these models seems to be related to:

   - the amount of pre-service and in-service training and program supervision provided by model
   - the adequacy of facilities and materials in a particular Head Start center
   - the political stability of a Head Start center within the community.*

8. Children in different Planned Variation models experienced different programs related to the different educational philosophies of the models.

   - in areas of primary importance to preschool models, children's experiences reflected models' stated orientations.

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*Implementation of Planned Variation in Head Start, 1. Review and Summary, Joan Bissell, p. iii.

- in areas of lesser importance to models, children's experiences were less distinctive.*

9. Preschool programs with different theoretical orientations and different curricula appear to have differential impacts on the children.

> When Planned Variation was undertaken in 1969, two patterns of programs' effects had been documented in research projects involving a small number of models and children in particular locations. One comparative evaluation (Weikart, 1969) had demonstrated an equality of effects of well-implemented programs: three different preschool curricula, all with highly trained teachers and careful program supervision, had produced performance and academic achievement.
>
> Several other comparative evaluations (Di Lorenzo et al., 1969; Karnes et al., 1969; Miller and Dyer, 1970) had yielded findings consistent with the notion of a specificity of effects. In each of these comparisons, programs with particular emphases and well-formulated objectives in specific areas did indeed have larger effects in these areas than did other programs.
>
> The pilot year Planned Variation findings suggest that a global appraisal supports the equality of effects pattern, but more differentiated analyses point to a pattern of specific effects. Equal effects of well-implemented curricula were reflected in the fact that although there were some significant differences among models, the more striking findings concerned the large effects of all well-implemented classes and the frequent (although small) favoring of model over "regular" classes. At the same time, a specificity of effects was manifested such that programs with well-formulated objectives in particular areas did produce effects consistent with their orientations (p. 30).

10. With few exceptions already discussed, short-term preschool interventions do not appear to make long-term differences in either I.Q. or achievement unless the intervention continues into the elementary school grades. Continuity of gain has been maintained when the preschool intervention and the primary grade program are coordinated within the elementary school (Deutsch). It has also been maintained through summer enrichment programs for the children along with home visits to parents throughout the year in a program by Gray and Klaus.

The issue of durability of effects is also being investigated on the National Follow Through program. Based on the study by the Stanford Research Institute, Joan Bissell has reported the following results in the executive summary of the report on the Follow Through program:

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*Ibid.

- Follow Through children made greater gains in achievement during the school year than did non-Follow Through children. The differences were statistically significant in both the kindergarten and first grade samples.

- Effects of Follow Through on achievement were greatest for children below the poverty line. Both kindergarten and first grade Follow Through children from these families made notably large gains in achievement, and the differences between their gains and those of comparison children were statistically significant at both grade levels.

- Follow Through's effects on achievement were largest in magnitude and most consistent in Structured Academic approaches--those approaches emphasizing the teaching of academic skills and information through sequentially structured activities and frequent extrinsic reinforcement. The differences between achievement gains of Follow Through children in these approaches and comparison children were statistically significant at both kindergarten and first grade. Additional statistically significant differences in achievement between Follow Through and non-Follow Through children were found at either kindergarten or first grade (but not both) in other approaches, with all of these findings favoring Follow Through children.

- Follow Through children manifested positive shifts in attitudes towards school and learning during the school year, shifts larger than those of comparison children in both kindergarten and first grade. The differences approached statistical significance at both grade levels.

- Follow Through participants whose families were definitely below the Office of Economic Opportunity poverty line made the largest positive shifts of any children in attitudes towards school and learning. Their gains were greater than those of comparison children at both grade levels, and the differences were statistically significant among first graders.

- Positive shifts in attitudes towards school and learning among Follow Through children were largest and most consistent in Discovery and Eclectic approaches, with children in these approaches making larger gains than comparison children in both kindergarten and first grade. These approaches tend to view the child's development as a complex whole, in which the growth of a positive self-image, initiative, independence, expectations of success, and problem-solving skills are all important and interrelated aspects.

- In the Discovery and Eclectic approaches, there was a statistically significant association between gains in achievement and positive shifts in attitudes towards school and learning. In other words, in these approaches children's growth in attitudes and in achievement went hand-in-hand. In the Structured Academic approaches, in contrast, growth in achievement and in attitudes were found to be independent of one another.

- Follow Through's consequences for teachers were suggested in both attitudes and behaviors. Follow Through teachers were more likely to consider home visit important and to make more home visits, and to place high value on parents' direct participation in the classroom than non-Follow Through teachers. In addition, Follow Through teachers showed markedly greater satisfaction with the progress of their students than did non-Follow Through teachers.

- Systematic observations of Follow Through classrooms indicated that approaches differed in actual practice in accordance with their published program descriptions. The kinds of activities engaged in by different classes, the role of children's own inquiry versus teacher-directed learning, and the nature of teachers' praise and feedback were a few of the dimensions for which objective observations verified the correspondence between a program's orientation and children's day-to-day experiences. The systematic observations also showed that most adult-child communication in Follow Through classes focussed on the individual child or a small group of children, with significantly more adult communication being addressed to large groups of children in non-Follow Through than in Follow Through classes.

Needs and Gaps in Child Development Intervention Programs

1. There is need to know how early it is necessary to initiate enrichment programs in order to maximize long-term gains.

2. There is need to know how frequently per week and how many hours per week intervention is necessary to produce gains.

3. There is need to learn how long enrichment programs must continue in order to maintain durability of gains.

4. There is a need to establish optimal times for specific interventions with children and with parents.

5. There is a need to examine the effects of periodic intervention at different age periods.

6. There is a need for long-term follow-up after the termination of intervention.

7. Some recent long-term follow-ups have revealed various "sleeper effects," i.e., effects which were not evident until quite a bit of time after intervention ended. There is need to continue examining for such effects.

8. A few evaluations are now examining the impact of various sequences of intervention experiences. We need further evaluation along this line.

9. There is need to evaluate and compare both on a short- and long-term basis, the impact on parents and children of various components and combinations of components of intervention studies, such as medical services, social services, counseling and psychotherapy, and parent and child education as well as home vs center programs.

10. There is need to explore the long-term effects of environmental manipulations as well as interventions with children.

11. There is need for further examination of the impact of different curricula with different groups of children.

12. There is need to continue and expand the study of the immediate and long-range effects of mass media including television on the cognitive and social development of children.

13. There is need to further explore the possibilities of programmed learning and computer-assisted learning with young children and with parents.

14. There is a need for "Planned Variations" in home-based programs for infants and preschoolers including comparisons between various curricula and a group which receives a regular visit but no explicit training.

15. There is need to examine the long-term effects of peer group values, attitudes and behavior on young children.

16. There is need to explore further methods of changing parental attitudes and behavior including group dynamics methods.

17. We need to more fully evaluate the short- and long-term effects of parent participation in program decision-making on program content and operations, staff, and children, as well as on the parents who do or do not participate.

18. There is an increase in the range and types of impact being measured. For example, in addition to changes in I.Q. and achievement, changes in various learning styles and social-emotional characteristics are being examined. This trend needs to be continued.

19. There is need to examine further the impact of preschool intervention programs on immediate and long-range family relationships, including parents and siblings.

20. Indirect effects of intervention programs, such as effects on neighborhood children and younger siblings who did not directly receive program services, have been found in a few studies. More studies need to examine for such effects.

21. Program impact is being assessed so that more focused and differentiated information is obtained than previously. For example, instead of just making comparisons between an entire experimental group and another experimental group and/or a control group on an overall score, as was done in earlier studies, more recently results on sub-tests and for sub-groups are being looked at. This trend needs to be continued and expanded even further.

22. There is need to consider individual differences in intervention program, development and assessment.

23. We need to more closely examine the process of change rather than just the products of change.

24. We need to look further at patterns of results on various measures in addition to looking at results on individual measures.

25. There is need to analyze contingencies between environmental events and behavior both in natural settings and in intervention programs.

26. We need to examine long-range effects as they are affected by differing life experiences and conditions which follow the intervention program.

27. There is need to look for unintended positive as well as potentially harmful effects of intervention programs on young children and their families.

28. There is a need to further consider the relationship between program development and program evaluation. How can we provide opportunities for modifying programs while they are in operation and provide time for full implementaiton of the program while at the same time making reliable, valid assessments of program impact? Current efforts to resolve this issue include delaying evaluation for a number of years and including as a part of program evaluation a close examination of the program procedures actually in effect.

29. One longitudinal intervention study is being designed so that alternative approaches to sampling based on examination of "moving away" attrition vs. other sources of loss can be compared. Additional evaluation of different sampling methods would be very useful.

30. There is a need for increased cooperation and coordination in funding and evaluating various intervention programs.

Child Advocacy

Description of Programs and Activities

The concept of child advocacy is based on the precept that every child is entitled to the care and services which he needs for optimum development. The goals of child advocacy systems have been conceived as a) representing the best interests of all children and b) helping bring about coordinated programs of child services adequate to meet all children's basic needs.

The concept of child advocacy was advanced by the Joint Commission on Mental Health of Children following a three-year study (1966-1969) on the critical problems of children. The Commission recommended that federal funding be provided for the establishment of an advocacy system at every level of society.

The 1970 White House Conference on Children, Forum 24, on Child Advocacy, recommended that a national system of child advocacy be implemented under the auspices of a designated, concerned federal agency which would serve to financially support neighborhood child advocacy councils and their programs.

An HEW Task Force composed of chiefs of agencies working with children has been studying the child advocacy concept and ways to implement its development and has been reviewing pending legislation.

On March 30, 1971, Senator Ribicoff introduced S.1414, a bill to amend the Social Security Act by providing for the establishment of a child advocacy program. This bill is presently pending action in the Senate Finance Committee.

Efforts in relation to the first above-mentioned child advocacy goal, that of representing the best interests of all children, are quite fluid and generally do not, at least as yet, directly involve research. The aspect of present child advocacy efforts which fits within the research focus of this paper is that related to the second child advocacy goal, that of bringing about adequate, coordinated child services. Therefore, this section of the paper discusses child advocacy projects which are primarily directed toward bringing about adequate coordinated child services.

The Community Coordinated Child Care Program (4-C) (#4 in Appendix F), funded by the Office of Child Development and the Department of Housing and Urban Development (Model Cities) in FY 1971, is a child advocacy program to develop local systems of child care services in each of 10 states.

In FY 1971, 6 child advocacy pilot demonstration projects were jointly funded by the Office of Education's Bureau of Education for the Handicapped and the National Institute of Mental Health. A description of each of these projects appears in Appendix G. In addition, 6 studies funded by the Office of Child Development in FY 1971 involve the development and/or evaluation of child advocacy programs. Descriptions of these studies are also in Appendix G. These 12 child advocacy projects are attempting to increase the adequacy of existing services for children as well as promote the development of new services and delivery systems. Eleven of these 12 projects involve the development of new child advocacy systems (#1-11), while the other project is attempting to evaluate the impact of existing advocacy programs and activities (#12). One of the 11 projects developing new child advocacy systems is at the state level (#1); the other 10 projects are at the neighborhood level. Of the 10 neighborhood advocacy projects, 3 are within a large city (#2-4), 5 are within a medium-sized city (#5-9), and 2 are in rural communities (#10 and 11). Minority groups involved in these projects include blacks, Mexican-Americans, American Indians, and Eskimos. Eight of the 11 projects developing new advocacy systems are dealing with a broad range of services and community networks. The other 3 projects are focusing primarily on one type of service--1 on the educational system (#8) and 2 on day care (#4 and 9). Three of the 12 advocacy projects explicitly mention, in the information in our system, involving the judicial and/or legal system (#1, 2, 7). Information on 5 of the 12 projects mentions inclusion of activities to evaluate the impact of child advocacy systems (#1, 4, 10, 11, 12).

Needs and Gaps in Child Advocacy Programs

Consideration of the above-described child advocacy projects and proposed goals indicates the following needs and gaps in the area of child advocacy:

1. The duration of demonstration projects needs to be long-term so that the broad and complex activities involved can be fully implemented.

2. The effects of child advocacy systems need to be measured on both short-term and long-term bases so that the various stages of development of such systems are described and evaluated.

3. The outcomes of various child advocacy models need to be compared.

4. The effects of various components and combinations of components of child advocacy systems need to be evaluated and compared.

5. Assessment of the impact of a particular child advocacy system should take into account the particular needs and resources of the population and region served.

6. Attention to the legal rights of children needs to be included within child advocacy programs.

7. Child advocacy systems at every level of society -- including federal, state, regional, and local levels -- have been recommended.

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